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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/743,673

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Jerry P. Honstein

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2509

7590

08/28/2006

William L. Chapin  
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EXAMINER

STOKES, CANDICE CAPRI

ART UNIT

PAPER NUMBER

3732

DATE MAILED: 08/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/743,673

Applicant(s)

HONSTEIN ET AL.

Examiner

Candice C. Stokes

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2,3,7,9,11,13,15-28 and 32-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28,32-41 and 48-51 is/are allowed.
- 6) ☒ Claim(s) 2,3,7,9,11,13,15-27,42-45 and 52-63 is/are rejected.
- 7) ☒ Claim(s) 46,47 and 64-69 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

It is unclear if pages of the specification are missing. Please resubmit. Also, Applicant indicates page 57, line 28 has been amended to include the uncton of ribs 629, however, such amendments were not found.

### ***Claim Objections***

Claim 60 is objected to because of the following informalities: in line 2, “said abutnet flange” should be “said abutment flange”. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

Claims 1-27 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure, which is not enabling. Internal flanges critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The internal flanges are considered critical because they provide the opening after the break-away panel is removed.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

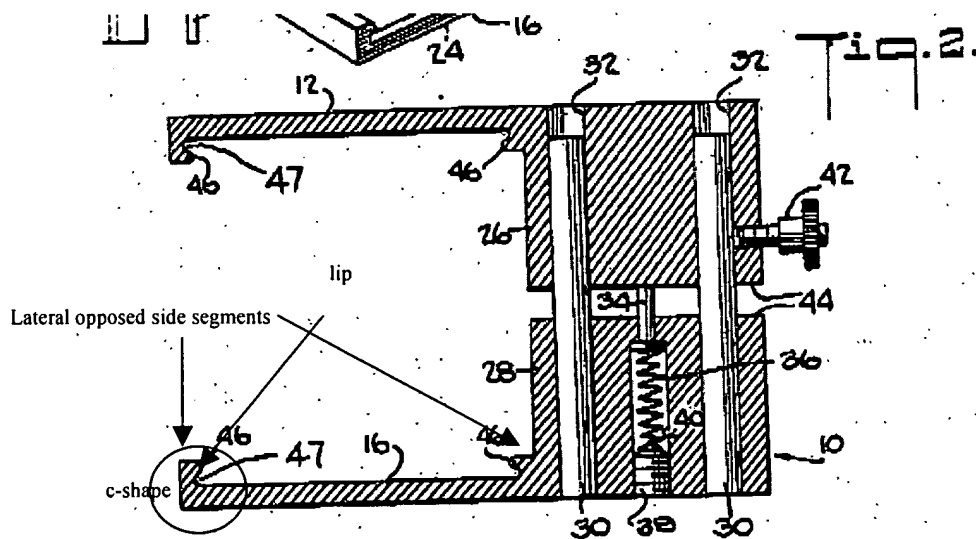
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1) Claims 42-43 and 60-63 are rejected under 35 U.S.C. 102(b) as being anticipated by Windish (USPN 3,059,336). Windish discloses a slide receptacle 12, said slide receptacle 12 comprising; a base plate(best shown in Figure 2 defined by the space between the flanges 46); means for releasably attaching 46 a dental model tray containing a dental model cast 14 to said base plate, means for releasably attaching 26 said base plate to an arm of an articulator apparatus 10; and whereby said dental model cast 14 is repeatedly fixable in a pre-determined position on said articulator arm for occlusal relationship to an opposing arch, without requiring application of plaster or other attachment means to said tray, and whereby said tray is removable from said receptacle 12 and connectable via hinge coupling means to comprise with an opposing dental model cast in an opposing tray an articulatable full-mouth dental model not requiring use of said articulator apparatus. Regarding the limitation “for releasably holding a full-arch dental model tray and cast 14 and attaching the receptacle to an arm of an articulator apparatus 10”, this is a recitation of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably

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distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. As to Claim 43, the slide receptacle 12 having means for releasably attaching 46 a dental model tray to said base plate is further defined as comprising in combination: a horizontally disposed abutment flange 46 which protrudes from a perimeter wall of said base plate of said tray; and means 47 attached to said base plate for frictionally engaging said abutment flange in response to sliding lower surface of said tray on an upper surface of said base plate. To claim 60, said means attached to said base plate includes a channel structure 47. Further to claim 61, the channel structure 47 is further defined as comprising in combination a flange wall 46 having a lip (shown where "46" ends) which protrudes upwardly from the upper surface of said base plate forming a C-shape cross section (see Figure below). As to claims 62 and 63, see Figure also.



2) Claims 52-57 are rejected under 35 U.S.C. 102(e) as being anticipated by Jung et al (US 2004/0013998). Jung et al disclose a dental modeling tray 12 for molding dental models, the improvement comprising providing at least elongated rib 56 which protrudes upwardly into an upper well portion 14 of said tray 12 adapted to receive molding material, whereby a dental

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model molded from molding material introduced into said well 14 has formed in a base portion of said cast an upwardly protruding indentation having an elongated shape complementary to that of said protuberance 56, said indentation being of an appropriate size and shape to serve as a pilot indentation for guiding into said base a point of a drill bit. The limitation "used to form in said base a bore for receiving a manipulating pin" is a recitation of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. This also anticipates Claim 55. As to Claims 53 and 56, said protuberance 56 is located generally midway between longitudinally disposed sides of said upper well 14. Regarding Claims 54 and 57, said protuberance 56 is further defined as being a longitudinally elongated rib, which is parallel, to said longitudinally disposed sides of said upper well 14.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1) Claims 2-3,7,9,11,13,15-27, and 58-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho ('601) in view of Cho ('681) and in further view of (Jung et al (US 2004/0013998). Cho ('601) discloses a molding tray 18 for use in making a dental prostheses model from an impression mold having formed therein imprints of a patient's teeth, said molding tray comprising: an elongated hollow body having a lower surface 22, a peripheral wall (formed

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by front 28, rear 30m left 24, and right 26) which circumscribes a hollow interior space of said body and protrudes perpendicularly upwardly from said lower surface and which terminates in an upper surface (as best shown where line of 30 ends)parallel to said lower surface; at least one pair of opposed internal flanges 58,60 disposed between inner facing wall surfaces of said peripheral wall, said flanges 58,60 having generally flat, co-planar upper surfaces which are parallel to said upper surface of said body, said flanges having between opposed inner facing edges thereof a longitudinally elongated aperture (when 56 is disengaged), and forming between upper and lower surfaces of said body and inner wall surfaces of said upstanding peripheral wall of said body, upper and lower wells (see Figures 2 and 3), respectively; openable means 56 for sealing said aperture to thereby form with said flanges 58,60 a temporary base wall for said upper well which is capable of receiving and holding a liquid cast- forming, molding material such as plaster-of-Paris or liquid die stone; a plurality of longitudinally spaced apart protuberances 42,44 which protrude inwardly from inner surfaces of opposed sides of at least an upper portion of said peripheral wall of said body adjacent to said upper well, said protuberances 42,44 alternating with grooves formed between said protuberances, and e. whereby liquid die stone is introducible into said upper well and hardened to comprise a base of a dental model cast, said openable means 56 for sealing said flange aperture opened, an upwardly directed force (see column 5, lines 39-43) is exerted on said base of said dental model cast to thereby eject said cast from said molding tray. The Cho('681 patent) teaches said dental model cast is segmented into individual die segments 47,47',47'', selected ones of which optionally have a manipulating pin inserted into bores thereof, and said die segments 47,47',47'' re-inserted into said upper well of said tray to predetermined horizontal index positions enabled by engagement of said

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protuberances and grooves of said tray with complementarily shaped grooves and protuberances molded into sides of said bases of said die segments. and to predetermined vertical index positions enabled by abutment of lower surfaces of said die segments 47,47',47'' with upper surfaces of said flanges, said lower well of said tray 18 being of sufficient depth to position lower surfaces of said manipulation pins above said lower surface of the tray (see column 4, lines 43-52). Cho ('601 patent) also discloses in Figure 1 said upper and lower wells have approximately equal depths, measured from said upper surface of said peripheral wall to said upper surfaces of said flanges, and said lower surface of said peripheral wall to said lower surfaces of said flanges, respectively; and the lower well having a shape generally symmetric to that of said upper well, said upstanding peripheral wall is further defined as including a pair of longitudinally elongated, spaced apart longitudinal parallel wall segments 24,26 and at least one transverse end wall segment 28,30 disposed transversely to said longitudinal wall segment 24,26. Regarding Claim 11, said openable means 56 for sealing said aperture bordered by inner facing edge walls of said flanges 58,60 is further defined as being an insert lodgeable in said aperture. As to Claim 15, the molding tray 18 further includes at least two abutment flanges (as best shown in Figure 1 projecting out from the bottom of each tray), one each of which protrudes radially outwardly from each of two sides of said peripheral wall of said tray. The molding tray also includes releasable attachment means 128,144 for releasably attaching said tray 18 to a second of said trays 20. This anticipates Claim 16. Further regarding Claim 17, said releasable attachment means 128,144 is further defined as comprising in combination a bracket 128 protruding outwardly from a side of said peripheral wall of said body, and a hinge mechanism means 144 for pivotably coupling said bracket 128 of said tray 18 to a bracket 130 of a second



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tray 120 to thereby enable pivotable relative motion between said trays 18,20 in a plane perpendicular to upper edge walls (as best shown where the line 30 ends) of said trays 18,20. Further to Claim 18, said bracket 128 is further defined as protruding perpendicularly outwardly from a transversely disposed one of said abutment flanges 132. As to Claim 19, said protuberances 42,44 and grooves are disposed perpendicularly to said upper surface ( where line 30 ends) of said elongated hollow body of said tray 18. Regarding Claim 22, said grooves (between the protuberances) are wider than said protuberances 42,44. With respect to Claim 23, Figures 2 and 3 show the molding tray 18 wherein said upstanding peripheral wall of said hollow body has a longitudinally elongated, generally rectangular plan-view shape. As to Claims 24 and 25, said peripheral wall of said hollow body has in plan- view a shape approximating that of a semi-ellipse (as shown in Figures 11 and 12) and said upper and lower wells each have in plan-view the shape of a semi-elliptical sector. Regarding Claim 26, said peripheral wall includes a generally vertically disposed, semi-elliptically curved outer longitudinal wall segment 86, a semi-elliptically curved inner longitudinal wall segment 86 spaced radially inwardly of and parallel to said outer wall segment 86, and a transversely disposed peripheral wall segment 92 which coincides with a minor axis of a semi-elliptical plan-view trace of said peripheral wall. To Claim 27, Cho ('601 patent) also disclose the molding tray further including a semi-elliptically shaped web section 93 which joins inner facing vertical surfaces of said transverse and said inner longitudinal wall segments. Cho ('601) and Cho ('681) disclose the claimed invention except for the break-away panel providing a protuberance protruding upwardly from the upper surface of the break-away panel. Jung et al teaches a break-away panel is further defined as being provided with at least one protuberance 56 which protrudes upwardly from an upper surface of said break-

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away panel into said upper well, whereby a dental model cast formed from liquid die stone poured into said well has formed in a base portion of said cast an upwardly protruding indentation having a shape complementary to that of said protuberance 56, said indentation being of an appropriate size and shape to serve as a pilot indentation for guiding into said base a point of a drill bit used to form in said base a bore for receiving a manipulating pin. As to Claim 9, said protuberance 56 is located generally midway between longitudinally disposed sides of said upper well. With regards to Claim 10, said protuberance 56 is further defined as being a longitudinally elongated rib which is parallel to said longitudinally disposed sides of said upper well. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the protuberances as taught by Jung et al into the device disclosed by Cho ('601 and '681) in order to provide a means for making impressions within the dental cast to provide guidance for drilling into the cast.

As to Claims 6 and 7, said flanges 58,60 are further defined as including at least a first pair of opposed longitudinal flanges which protrude inwardly towards one another from inner surfaces of longitudinally disposed peripheral wall of said segments,. Further said openable means 56 for sealing said aperture bordered by inner facing edge walls of said flanges is further defined as comprising in : combination at least one break-away panel within said aperture which is joined at outer peripheral edges thereof to inner peripheral edges of said flanges by frangible members. Cho ('601 patent) and Cho ('681 patent) fail to disclose at least one transverse flange, which protrudes inwardly towards from an inner surface of a transversely disposed segment of said peripheral wall. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate at least one of flanges 58,60 transversely to the other

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flanges, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70.

Regarding Claims 20-21, Cho ('601) and Cho ('681) disclose the claimed invention except for the grooves being an inverted wedge shape and the protuberances having a triangular shape. It would have been an obvious matter of design choice to make the grooves and protuberances of any desired shape, since such a modification would have involved a mere change in the shape of a component. A change in the shape is generally recognized as being within the level of ordinary skill in the art.

2) Claims 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Windish. Windish discloses the claimed invention except for the base plate being semi-elliptical. Windish does disclose the slide receptacle 12 further including a plurality of indexing members 46, which protrude downwardly from a lower surface of said base plate. It would have been an obvious matter of design choice to make the base plate of any shape that could hold a dental tray or cast, since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art.

***Allowable Subject Matter***

Claims 28, 32-41 and 48-51 are allowed.

Claims 46-47 and 64-69 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments filed 05/31/06 with regard to claims 52-57 and 42-43 have been fully considered but they are not persuasive. Applicant's main argument is directed toward the registration struts being located generally midway between longitudinally disposed sides of said upper well. This however is not recited in the claims. Windish does disclose a slide receptacle as taken at the broadest reasonable interpretation in light of the specification by the Examiner. It is a receptacle because it receives and the term "slide" is satisfied because the tray/cast received by the body must be slid into the receptacle. It is irrelevant whether the device is for attaching a model cast or tray, as claimed by Applicant because this is a recitation of intended use and there is no difference in the structure of the device as claimed by Applicant and the Windish device.

Applicant's arguments with respect to claims 2,3,7,9,11,13 and 15-27 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments, with respect to claims 28 and 32 have been fully considered and are persuasive. The rejection of claims 28 and 32 has been withdrawn.

Applicant has still not provided sufficient enablement for the internal flanges in the specification. Applicant has amended the drawings in an attempt to show the flanges, however, the added figure numbers are directed to dotted lines, which are not explained in the body of the specification.

***Conclusion***

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Candice C. Stokes whose telephone number is (571) 272-4714. The examiner can normally be reached on 8:00am - 4:30pm.

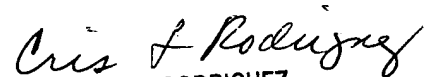
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Candice C. Stokes



CRIS L. RODRIGUEZ  
PRIMARY EXAMINER